



## GUARANTEES OF ORIGIN

*Implementation for Gas*

BIOMETHAVERSE

Innovative Biomethane Production Routes in Europe

20<sup>th</sup> June 2024



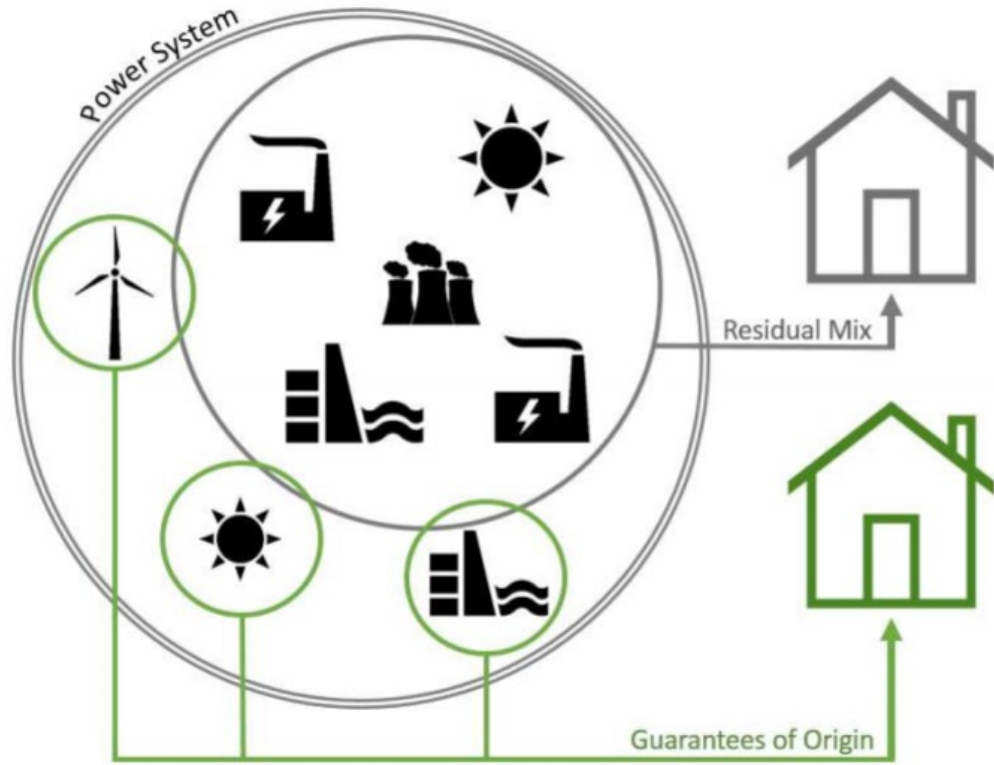
# DAPEEP – Operator for RES & Guarantees of Origin

State-owned company under the supervision of the Ministry of Environment and Energy and the Regulatory Authority for Energy Waste & Water

DAPEEP's authority in the electricity sector :

- Subsidise the operation (Feed-in-Tariff / Feed-in-Premium) of RES & HE-CHP in the Interconnected System
- Administration of ELAPE: the Account that facilitates the operational subsidy in Greece
- Representation to the electricity market of the power stations that are subsidised with FiT
- Competent Authority for State Aid schemes for climate, energy and environment.
- Auctioneer of the CO2 Emissions Allowances
- Authorised Issuing Body for Guarantees of Origin (GO)
- Competent Body for Disclosure and Residual Mix calculation
- Auctioneer of GOs

# GOs : Tracking the energy attributes



## ▶ Guarantees of Origin

Electronic Certificate which has the sole function of providing evidence to a final customer that a given share or quantity of energy was produced from renewable sources

## ▶ The Residual Mix

the total annual energy mix for a Member State, excluding the share covered by cancelled guarantees of origin

# European Regulatory Framework

## Internal Energy Market Design Directive (IEM) 2019/944(EU)

- Disclosure Obligation for electricity suppliers and obligation for Member states to supervise.

## Gas Market Directive (16516/23(EU) built upon interinstitutional file 2021/0425 COD)

- Disclosure Obligation on renewable gases and obligation for Member states to supervise.

## Renewable Energy Directives 2009/28 (EC), 2018/2001(EU) and 2023/2413(EU)

- Purpose of Guarantees of Origin
- Basic rules for issuance and information content of GOs
- Standardization according to CEN EN 16325
- MS and Suppliers' obligations

## Corporate Sustainability Reporting Directive 2022/2464(EU)

- Disclosure Requirement for corporates: Energy consumption and share of RES in their mix.

## Delegated Act RFNBO 2023/1184(EU)

- Criteria on considering electricity consumed for RFNBOs as renewable

## Green Claims Directive

- Green Claims must be substantiated – responsibility on member states



# DAPEEP – Operator for RES & Guarantees of Origin

## Issuing Body for Guarantees of Origin (GO)

Issuing Body for electricity GOs since 2010  
Authorization to extend to gas GOs in 2022  
Competent Body for Disclosure since 2018  
Registry connected to AIB HUB since 2023  
Auctioneer of GOs (first auction 26/6/2024)

## New Registry implementation

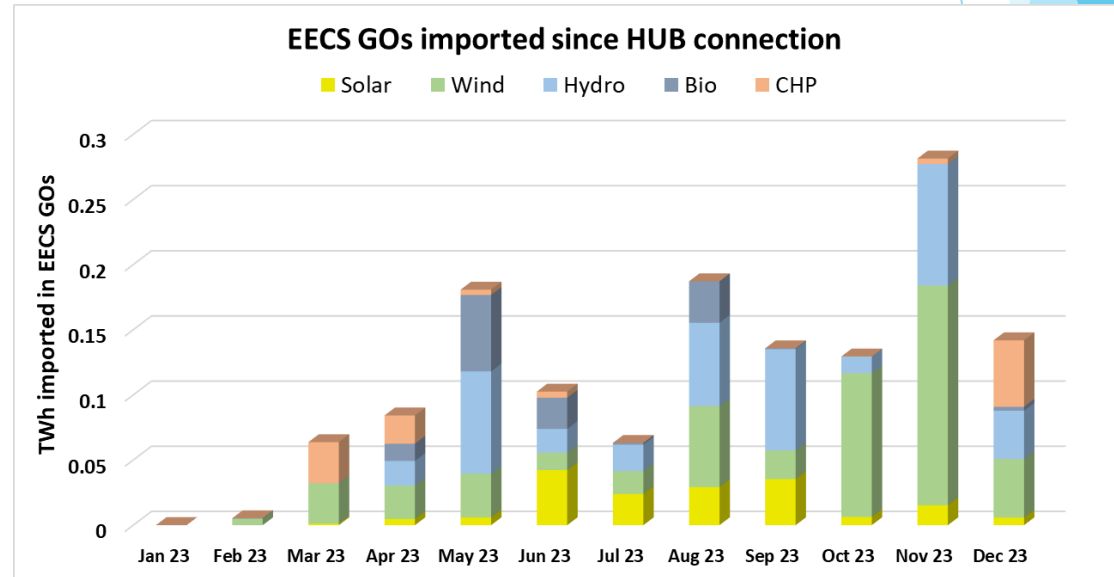
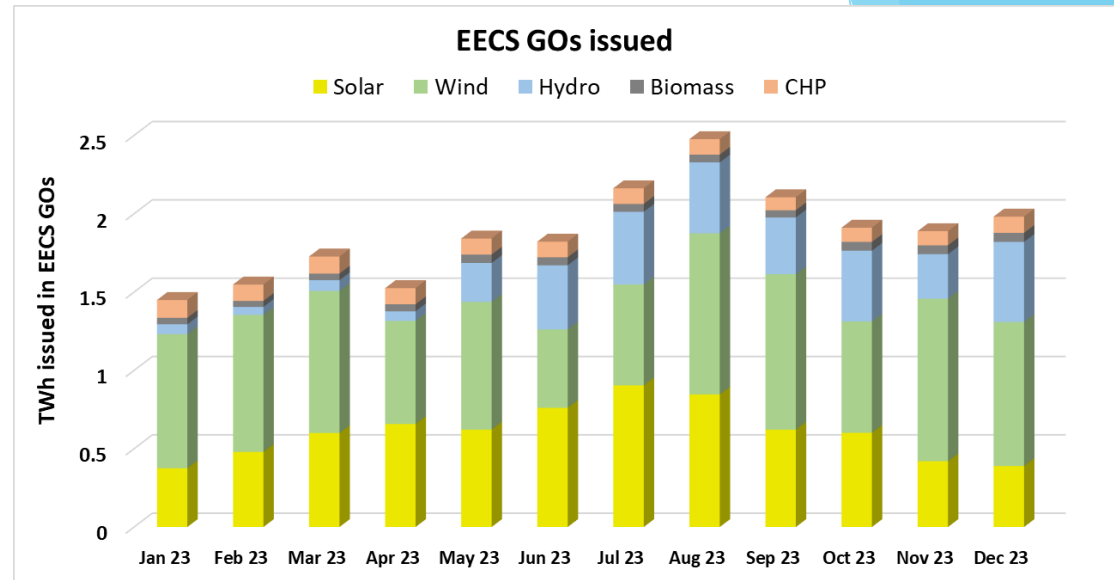
August 2023	UAT finalized, new Registry in productive mode
September 2023	Technical audit successfully performed by AIB HUB administrator
October 2023	Connection to the AIB HUB approved and established
January 2024	Standard Terms and Conditions (STC) signed by Account Holders Account Holders were provided access to the Registry First transactions over the HUB



## Transaction statistics in MWh for 2023 production

National Production	24,838,575
EECS GO issued	22,433,216
-> From which eligible for auctions	4,448,923
EECS GO cancelled	15,491,460
-> From which for green products	528,234
EECS GO imported	1,375,521

Updated: 20 March 2024





# Member of AIB

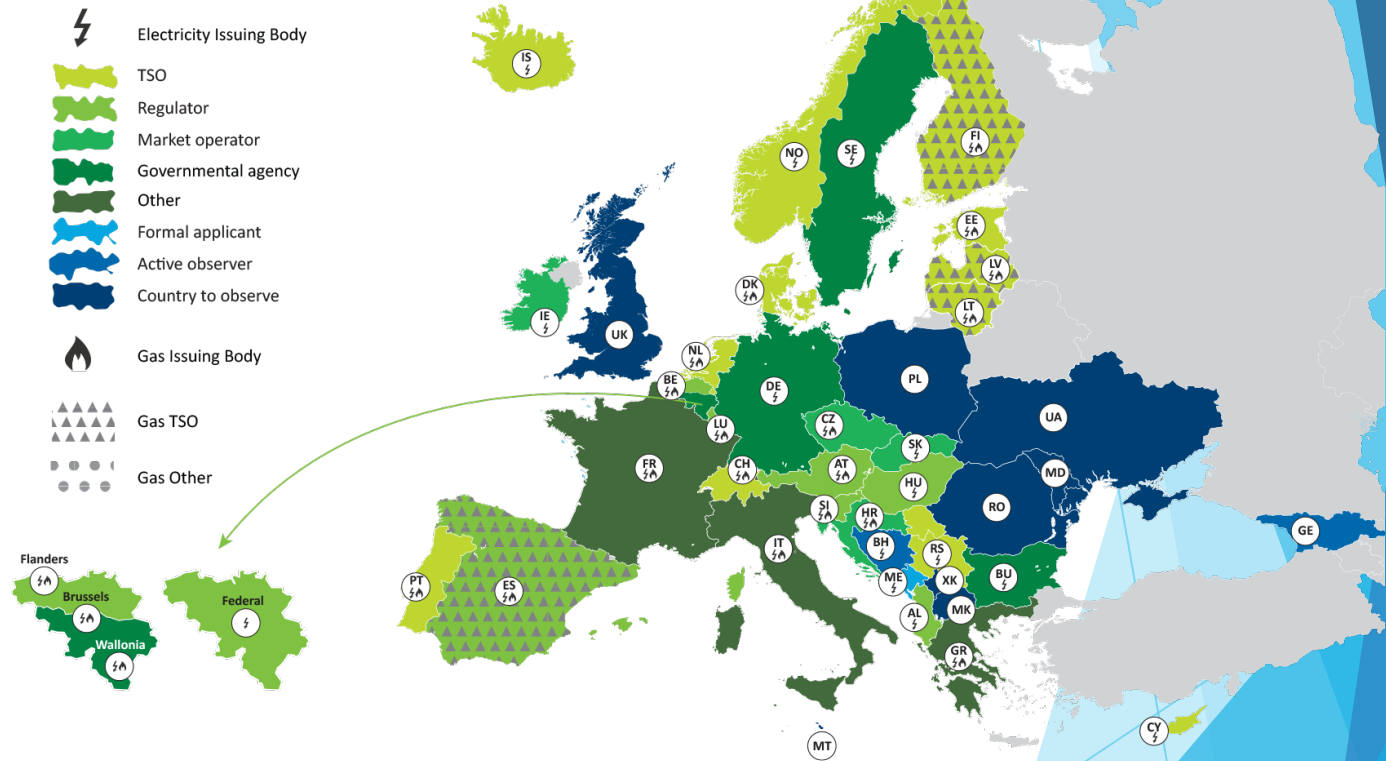


## AIB - Member Countries / Regions

- All members are appointed by the members state as Issuing Bodies for Guarantees of Origin
- 37 members from 30 countries
- Geographical scope: EU - EFTA – Energy Community

## Developer and custodian of the EECS™ standard

- I. **EECS Rules:** engaging into quality and harmonisation
- II. **IT hub:** enables GO transfer between national/regional Domain registries
- III. Regular **audits**



# GO Data Fields under EECS™ compatible with EN 16325

## Data on generic EECS Certificate

Energy Carrier
•Electricity / Energy Gas / Hydrogen
Product
•GO / Support Certificate / Target Certificate / Independent Criteria Scheme
•Product name
Unique certificate number
Production period (start and end dates)
Energy source
Type of installation
Production device info
Identity and country of originating member
Issue date
Identity and country of relevant competent body
Purpose
•Disclosure, Support and/or Target
Support received by type
Dissemination level
Face Value
Conversion Tag & Storage Tag
Label(s) *
Carbon Footprint *
Timestamp *
Production Device Module *
Radioactive waste *

## Additional on Electricity GOs

### High-Efficiency Cogeneration

High Efficiency Cogeneration Criterion Met?

- Y/N
- If Yes, then also following fields are mandatory

Lower Calorific Value

Use of Heat

Primary Energy Savings

- % PES
- Absolute PES

GHG Emissions

- %
- Absolute

### Fossil energy sources

GHG Emissions

### Nuclear energy sources

Radioactive Waste

## Additional on Gas GOs

Type of Gas

- See Fact Sheet

Whether Higher or Lower Calorific Value

GHG Emissions Saved & Produced \*

- + Methodology reference

Sustainability Criteria met?\*

- Y/N; requirements, scheme, name Certification Body, reference to report

GHG saving criteria met?\*

Calorific value \*

End-Use of gas category\*

Source-Shares \*

Production Device Module(s) \*

- Description, capacity, date operational

Pre-Conversion support info \*

PurityOfGas \*

CompositionCriteriaReference \*

Advanced Biofuel Criteria Met? \*

Legend:

Mandatory information field

\*Optional information field



**TYPES OF ENERGY INPUTS AND TECHNOLOGIES****TECHNOLOGY CODES for Methane production: MXXXXXX**

By definition, certificates with technology codes starting with MXXXXXX (Methane) are complying with the technical rules for grid injection, as this category of technology codes is used for gaseous energy carriers that comply with the technical standards for injecting gas in the natural gas grid.

Level 1 Code	Level 1 Description	Level 2 Code	Level 2 Description	Level 3 Code	Level 3 Description	Full code
01	Anaerobic digestion	00	Unspecified	00	Unspecified	M010000
		01	Fermentation to biogas	00	Unspecified	M010100
02	Gasification	00	Unspecified	00	Unspecified	M020000
		01	Thermal gasification	00	Unspecified	M020100
				01	Gasification of wood	M020101
03	Chemical synthesis	00	Unspecified	00	Unspecified	M030000
		01	Methanation with CO2 from renewable origin	00	Unspecified	M030100
				01	Catalytic methanation	M030101
				02	Biological methanation	M030102

## TYPES OF ENERGY INPUTS AND TECHNOLOGIES

### FUEL (energy source)

Level 1 Code	Level 1 Description	Level 2 Code	Level 2 Description	Level 3 Code	Level 3 Description	Level 4 Code	Level 4 Description	Full code	CO2 Kg/GJ <sup>3</sup>				
00	Unspecified	00	Unspecified	00	Unspecified	00	Unspecified	F00000000	0.0				
01	Renewable	00	Unspecified	00	Unspecified	00	Unspecified	F01000000	0.0				
		01	Solid	00	Unspecified	00	Unspecified	F01010000	0.0				
				01	Municipal waste	01	Biogenic	F01010101	0.0				
				02	Industrial and commercial waste	01	Biogenic	F01010201	0.0				
				03	Wood	00	Unspecified	F01010300	0.0				
						01	Forestry products	F01010301	0.0				
						02	Forestry by-products & waste	F01010302	0.0				
						03	Saw products, by-products and waste	F01010303	0.0				
				04	Animal fats	00	Unspecified	F01010400	0.0				
				05	Biomass from agriculture	00	Unspecified	F01010500	0.0				
						01	Agricultural products	F01010501	0.0				
						02	Agricultural by-products & waste	F01010502	0.0				
				02	Liquid	00	Unspecified	00	Unspecified	F01020000	0.0		
						01	Municipal biodegradable waste	00	Unspecified	F01020100	0.0		
								02	Black liquor	00	Unspecified	F01020200	0.0
										00	Unspecified	F01020300	0.0
		03	Pure plant oil					01	Rapeseed ( <i>Brassica napus</i> L.)	F01020301	0.0		
								02	Sunflower ( <i>Helianthus annuus</i> L.)	F01020302	0.0		
								03	Oil palm ( <i>Elaeis guineensis</i> Jacq.)	F01020303	0.0		
								04	Coconut ( <i>Cocos nucifera</i> L.)	F01020304	0.0		
								05	Jatropha	F01020305	0.0		
		04	Waste plant oil					00	Unspecified	F01020400	0.0		
		05	Refined vegetable oil					00	Unspecified	F01020500	0.0		
						01	Biodiesel (mono-alkyl ester)	F01020501	0.0				
						02	Biogasoline (C6-C12 hydrocarbon)	F01020502	0.0				
		03	Gaseous			00	Unspecified	00	Unspecified	F01030000	0.0		

<sup>3</sup> This reflects the IPCC statistics where these exist for an energy source, and otherwise the Dutch table of standard CO2 emission factors for energy production



# Gas produced from renewable energy sources

## UnionDataBase (UDB)

### article 25-30 RED II

Developed by DG ENER : only consignments registered can be accounted for the national target

Economic Operators: producers, traders, large consumers, suppliers for retail

Voluntary or National Schemes

- ▶ Approved / accredited by European Commission
- ▶ Certification Bodies issue Proof of Sustainability (PoS)

For each consignment registered in the UDB, EO declare the PoS

- ▶ producers transfer the PoS within the UDB
- ▶ consumer/retailer claim directly on DB based on the receipt of PoS

Link UDB-GO Registries to avoid double counting of renewable attributes

Continuous development of Gas GOs: additional fields indicating if sustainability criteria are met, with reference to Voluntary Scheme, Certification Body, etc



Thank you for your attention

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